

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing Of Claims:

Please amend the claims as follows:

1. (Currently Amended) A dual mode digital cordless handset configured for use in a system for providing voice and data services over a wired data network, the system ~~having comprising: an unregulated~~ a first wireless network including a wireless access point wired to the wired data network, the wireless access point operative to provide wireless access to the wired data network over ~~an unregulated~~ a wireless connection; and a regulated second wireless network operative to provide telecommunications services on regulated wireless communications frequencies; and the dual mode digital cordless handset comprising:

~~one or more dual mode digital cordless handsets operative to~~

means for receiving ~~receive~~ an Internet Protocol (IP) address, when in range of a wireless transmission area of the ~~unregulated~~ first wireless network;

means for providing ~~provide~~ identification information to the wired data network via the ~~unregulated~~ first wireless network;

means for communicating ~~communicate~~ in a first mode with the wireless access point of the ~~unregulated~~ first wireless network via the ~~unregulated~~ wireless connection in order to provide the voice and data services over the wired data network; and

~~when out of range of the wireless transmission area of the unregulated wireless network and in range of a wireless transmission area of the regulated wireless network;~~ means for switching switch from the unregulated first wireless network to the regulated second wireless network to communicate in a second mode with the regulated second wireless network in order to provide telecommunications services on the regulated wireless communications frequencies; when out of range of the wireless transmission area of the first wireless network and in range of a wireless transmission area of the second wireless network; and

means for sending subscriber identity module (SIM) information the wireless access point to register with the wired data network.

2. (Currently Amended) The dual mode digital cordless handset system of Claim 1, wherein the means for switching switches one or more dual mode digital cordless handsets are further operative to switch between the unregulated first wireless network and the regulated second wireless network without user action.

3. (Canceled)

4. (Currently Amended) The dual mode digital cordless handset system of Claim 1, wherein the dual mode digital cordless handsets are handset further comprises: operative

~~to detect~~ means for detecting signaling transmissions of the ~~regulated second~~ wireless network; and

~~to register~~ means for registering with the ~~regulated second~~ wireless network; and

~~to switch from the unregulated wireless network to the regulated wireless network.~~

5-6 (Canceled)

7. (Currently Amended) The dual mode digital cordless handset system of Claim 1, wherein the digital cordless handsets ~~are~~ handset further comprises ~~operative to transfer~~ means for transferring the identification information from the ~~unregulated first~~ wireless network to the wired data network where a determination is made regarding what voice and data services to provide based on the identification information.

8. (Currently Amended) The dual mode digital cordless handset system of Claim 1, wherein ~~a one of the one or more dual mode digital cordless handsets~~ handset ~~is operative to communicate~~ comprises means for communicating with the wired data network ~~via any one of a plurality of the~~ wireless access point ~~points~~.

9. (Currently Amended) The dual mode digital cordless handset system of Claim 8, wherein the ~~one or more dual mode digital cordless handsets~~ handset ~~is operative to switch~~ comprises means for switching between ~~any two of the~~ wireless

access ~~point points~~ and another wireless access point during voice or data communication.

10. (Currently Amended) The dual mode digital cordless handset system of Claim 9, wherein the means for switching between any two of the wireless access point points and another wireless access point switches when the dual mode digital cordless handset exits comprises exiting a wireless transmission area of a first wireless access point and when the dual mode digital cordless handset enters entering a wireless transmission area of a second wireless access point.

11. (Currently Amended) The dual mode digital cordless handset system of Claim 1, wherein the wireless access point is further operative to provide wireless access to the wired data network over the unregulated wireless connection is comprising an IEEE 802.11b 802 connection.

12. (Currently Amended) The dual mode digital cordless handset system of Claim 1, ~~wherein the regulated~~ second wireless network being operative to provide the telecommunications services on the wireless communications frequencies over ~~connection is~~ a GSM/GPRS connection.

13. (Currently Amended) A method of providing voice and data services over a wired data network and over a ~~regulated~~ second wireless network to a dual mode digital cordless handset, comprising:

detecting, at the dual mode digital cordless handset, ~~an unregulated~~ a first wireless connection provided by a wireless access point, wherein the wireless access point is wired to the wired data network;

in response to detecting the ~~unregulated~~ first wireless connection, receiving an Internet Protocol (IP) address at the dual mode digital cordless handset;

providing identification information associated the dual mode digital cordless handset to the wired data network, wherein the wireless access point is configured to use subscriber identity module (SIM) information from the dual mode digital cordless handset to determine if a user associated with the dual mode digital cordless handset is a subscriber to the wired data network;

receiving incoming calls directed to the dual mode digital cordless handset and sending outgoing calls from the dual mode digital cordless handset ~~and~~ through the wired data network;

detecting, at the dual mode digital cordless handset, a loss of the ~~unregulated~~ first wireless connection;

detecting, at the dual mode digital cordless handset, a connection through the ~~regulated~~ second wireless network; and

in response to detecting the connection through the ~~regulated~~ second wireless network, receiving incoming calls directed to the dual mode digital cordless handset and sending outgoing calls from the dual mode digital cordless handset through the ~~regulated~~ second wireless network.

14. (Currently Amended) The method of Claim 13, further comprising:
after receiving and sending the calls through the ~~regulated~~ second wireless network, detecting, at the dual mode digital cordless handset, ~~an unregulated~~ the first wireless connection provided by a the wireless access point, wherein the wireless access point is wired to the wired data network; and
receiving incoming calls directed to the dual mode digital cordless handset and sending outgoing calls from the dual mode digital cordless handset through the wired data network.

15. (Previously Presented) The method of Claim 13, further comprising:
determining the voice and data services to provide to the dual mode digital cordless handset over the wired data network based upon the received identification information.

16. (Previously Presented) The method of Claim 13, wherein receiving the incoming calls directed to the dual mode digital cordless handset and sending the outgoing calls from the dual mode digital cordless handset through the wired data network comprises establishing a voice over Internet protocol (VoIP) session between the dual mode digital cordless handset and the wired network through the wireless access point.

17. (Previously Presented) The method of Claim 16, wherein receiving the incoming calls directed to the dual mode digital cordless handset comprises:

detecting an IP address associated with a telephone number to which the incoming calls are directed; and
if the IP address associated with the telephone number to which the incoming calls are directed matches the IP address received at the dual mode digital cordless handset, then establishing the VoIP session with the dual mode digital cordless handset.

18. (Previously Presented) The method of Claim 16, wherein sending the outgoing calls from the dual mode digital cordless handset comprises:

establishing the VoIP session between the dual mode digital cordless handset and the wired data network to receive telephone numbers associated with the outgoing calls at the wired data network; and completing the outgoing calls to parties associated with the telephone numbers.

19. (Currently Amended) The method of Claim 13, wherein detecting, at the dual mode digital cordless handset, the first wireless connection further comprises detecting the unregulated first wireless connection comprising an IEEE 802.11b 802 connection.

20. (Currently Amended) The method of Claim 13, wherein detecting, at the dual mode digital cordless handset, the first wireless connection further comprises detecting the unregulated first wireless connection is comprising a Bluetooth connection.

21. (Currently Amended) The method of Claim 13, wherein providing the voice and data services over the second wireless network comprises providing the voice and data services over the second wireless network over the regulated wireless connection is a GSM/GPRS connection.

22. (Currently Amended) A system for providing voice and data services over a wired data network and over a ~~regulated~~ second wireless network, the system comprising:

a broadband residential gateway comprising a first network device operative to communicate with the wired data network, a second network device operative to provide a communications link to one or more wired network devices over a wired connection, and a wireless access point operative to provide wireless access to the wired data network over ~~an unregulated~~ a first wireless connection;

a ~~regulated~~ second wireless network operative to provide telecommunications services on ~~regulated~~ wireless communications frequencies; and

~~one or more~~ a dual mode digital cordless handsets handset operative to, receive an Internet Protocol (IP) address, when in range of a wireless transmission area of the ~~unregulated wireless~~ access point network;

provide identification information to the wired data network via the ~~unregulated~~ wireless access point network;

communicate in a first mode with the wireless access point via the ~~unregulated~~ first wireless connection in order to provide the voice and data services over the wired data network; and

when out of range of the wireless transmission area of the ~~unregulated~~ wireless access point network and in range of a wireless transmission area of the ~~regulated~~ second wireless network, switch from the ~~unregulated~~ wireless access point network to the ~~regulated~~ second wireless network to communicate in a second mode with the ~~regulated~~ second wireless network in order to provide the voice and data services over the ~~regulated~~ second wireless network, wherein the wireless access point is configured to use subscriber identity module (SIM) information from the dual mode digital cordless handset to determine if a user associated with the dual mode digital cordless handset is a subscriber to the wired data network.

23. (Currently Amended) The system of Claim 22, further comprising ~~a one or more digital wired handsets~~ handset operative to communicate with the wired data network in order to provide the voice and data services.

24. (Previously Presented) The system of Claim 22, wherein the wired connection comprises a Home Phoneline Network Alliance (HPNA) connection.

25. (Currently Amended) The system of Claim 23, wherein the wired data network is operative to generate a telephone call directed toward the broadband residential gateway and wherein the telephone call may be answered on ~~any of the one or more~~ dual mode digital cordless ~~handsets~~ handset or ~~any of the~~ digital wired ~~handsets~~ handset.

26. (Currently Amended) The system of Claim 23, wherein the broadband residential gateway is operative to generate a telephone call directed toward the wired data network and wherein the telephone call may be initiated on ~~any of the one or more~~ dual mode digital cordless ~~handsets~~ handset or ~~any of the~~ digital wired ~~handsets~~ handset.

27. (Currently Amended) The system of Claim 23, wherein the system further comprises a directory information database and wherein ~~any of the one or more~~ dual mode digital cordless ~~handsets~~ handset or ~~any of the~~ digital wired ~~handsets are~~ handset is operative to access directory information provided by the directory information database.

28. (Currently Amended) The system of Claim 22, wherein the dual mode digital cordless ~~handsets transmit~~ handset transmits a user identifier to the wired data network and wherein the system further comprises a restriction database of the wired data network that applies rules to telephone calls of the dual mode digital cordless

handset ~~handsets~~ based on the user of the dual mode digital cordless handset ~~handsets~~.

29. (Previously Presented) The system of Claim 22, wherein the system further comprises a web interface at a personal computer linked to the wired data network, wherein the web interface provides for entry of administrative information for providing the voice and data services over the wired data network.

30. (Currently Amended) The system of Claim 22, wherein the ~~unregulated~~ first wireless connection is comprises an IEEE ~~802.11b~~ 802 connection.

31. (Currently Amended) The system of Claim 22, wherein the ~~unregulated~~ first wireless connection is comprises a Bluetooth connection.

32. (Currently Amended) The system of Claim 22, ~~wherein~~ further comprising the second wireless network being further operative to provide the telecommunications services on the wireless communications frequencies over regulated wireless- ~~connection is~~ a GSM/GPRS connection.

33. (Currently Amended) The method of Claim 13, wherein providing the identification information further comprises providing the identification information associated with the dual mode digital cordless handset ~~is~~ being stored in a Subscriber Identity Module (SIM) card contained in the dual mode digital cordless handset.

34. (Currently Amended) The method of Claim 13, ~~wherein~~ further comprising:
sending the outgoing call comprises sending the outgoing calls ~~are sent~~ from the dual mode digital cordless handset through the wired data network; and
receiving the incoming call comprises receiving the incoming calls ~~are received~~ at the dual mode digital cordless handset through the wired data network using a Session Initiation Protocol (SIP).

35. (Currently Amended) The method of Claim 34, ~~wherein~~ further comprising storing the SIP ~~is stored~~ at the dual mode digital cordless handset.

36. (Currently Amended) The method of claim 13, ~~wherein~~ further comprising detecting, at the dual mode digital cordless handset, ~~detects~~ a loss of the ~~unregulated~~ first wireless connection when the dual mode digital cordless handset is moved from a transmission range of the wireless access point.

37. (New) The dual mode digital cordless handset of claim 1, wherein the wireless access point is further operative to provide wireless access to the wired data network over the wireless connection comprising an unregulated wireless connection.

38. (New) The dual mode digital cordless handset of claim 1, wherein the wireless access point is further operative to provide wireless access to the wired data network over the wireless connection comprising a connection configured to provide wireless service using at least one frequency not assigned to a service provider.

39. (New) The method of claim 13, wherein the first wireless connection comprises an unregulated wireless connection.

40. (New) The method of claim 13, wherein the first wireless connection comprises a connection configured to provide wireless service using at least one frequency not assigned to a service provider.

41. (New) The system of claim 22, wherein the first wireless connection comprises an unregulated wireless connection.

42. (New) The system of claim 22, wherein the first wireless connection comprises a connection configured to provide wireless service using at least one frequency not assigned to a service provider.

43. (New) The dual mode digital cordless handset of claim 1, wherein the second wireless network is further operative to provide telecommunications services on the wireless communications frequencies comprising regulated wireless communications frequencies.

44. (New) The dual mode digital cordless handset of claim 1, wherein the second wireless network is further operative to provide telecommunications services on the wireless communications frequencies comprising frequencies assigned to a service provider.

45. (New) The method of claim 13, the second wireless network being configured to use regulated wireless communications frequencies.

46. (New) The method of claim 13, the second wireless network being configured to use communications frequencies assigned to a service provider.

47. (New) The system of claim 22, wherein the wireless communications frequencies comprise regulated wireless communications frequencies.

48. (New) The system of claim 22, wherein the wireless communications frequencies comprise frequencies assigned to a service provider.

49. (New) The dual mode digital cordless handset of claim 1, wherein the wireless access point is wired to the wired data network through a broadband residential gateway comprising a broadband modem and a router, the broadband residential gateway being configured to enable another wireless access point to connect to the wired data network.

50. (New) The system of claim 13, wherein the wireless access point is wired to the wired data network through a broadband residential gateway comprising a broadband modem and a router, the broadband residential gateway being configured to enable another wireless access point to connect to the wired data network.

51. (New) The dual mode digital cordless handset of claim 1, wherein the wireless access point is further operative to provide voice-over-internet protocol (VOIP) service to the digital cordless handset.

52. (New) The dual mode digital cordless handset of claim 1, wherein the dual mode digital cordless handset further comprises means for receiving high-speed data service from the wireless access point.

53. (New) The dual mode digital cordless handset of claim 1, wherein the dual mode digital cordless handset further comprises means for receiving high-speed data service from the wireless access point wherein the received high-speed data service includes multimedia services.

54. (New) The dual mode digital cordless handset of claim 1, further comprising a media gateway configured to link at least one of the following to the wired data network: the first wireless network and the second wireless network.

55. (New) A dual mode wireless device comprising:

means for receiving an Internet Protocol (IP) address when in range of a wireless transmission area of a first wireless based IP network, wherein the dual mode wireless device is configured to connect with the first wireless based IP network via an IEEE 802 based wireless connection;

means for receiving IP based voice, data, and multi-media wireless transmissions in a dual mode configuration wherein a Session Initiation Protocol (SIP) is used for some part of the wireless transmissions;

means for providing identification information to the first wireless based IP network to register with the first wireless based IP network, the identification information comprising subscriber identity module (SIM) information contained in the dual mode wireless device;

means for communicating in a first mode with the first wireless based IP network through the IEEE 802 based wireless connection in order to receive the voice, data, and multi-media services; and

means for switching from the first wireless network to a second wireless network to communicate in a second mode with the second wireless network in order to receive telecommunications services when out of range of the wireless transmission area of the first wireless based IP network and in range of a wireless transmission area of the second wireless network.